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Harold D. Beck

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EXAMINER

AUGHENBAUGH, WALTER

ART UNIT

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1794

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Acknowledgement of Applicant's Amendments

1. The amendments made in claims 1, 2, 8, 10, 23-25 and 27 presented in the Amendment filed March 24, 2008 have been received and considered by Examiner.
2. New claim 28 presented in the Amendment filed March 24, 2008 has been received and considered by Examiner.

WITHDRAWN OBJECTIONS

3. All objections made of record in the previous Office Action mailed October 5, 2006 have been withdrawn due to Applicant's arguments in the response submitted on April 13, 2007 and Applicant's amendments in the Amendment filed March 24, 2008.

WITHDRAWN REJECTIONS

Claim Rejections - 35 USC § 112

4. The 35 U.S.C. 112, first paragraph, rejection of claims 1, 8, 10 and 14 made of record in the previous Office Action mailed October 5, 2006 has been withdrawn due to Applicant's arguments in the response submitted on April 13, 2007 and Applicant's amendments in the Amendment filed March 24, 2008.
5. The 35 U.S.C. 112, second paragraph, rejection of claims 26 and 27 made of record in the previous Office Action mailed October 5, 2006 has been withdrawn due to Applicant's arguments in the response submitted on April 13, 2007 and Applicant's amendments in the Amendment filed March 24, 2008.

Claim Rejections - 35 USC § 102

6. The 35 U.S.C. 102 rejection of claims 1, 2, 8, 10 and 21-27 as being anticipated by Igarashi et al. (USPN 5,223,571) made of record in the previous Office Action mailed October 5, 2006 has been withdrawn due to Applicant's deletion of "essentially" in "consisting essentially of" in independent claims 1 and 10 in the Amendment filed March 24, 2008.

NEW REJECTIONS

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 8 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Hasegawa et al. (USPN 6,755,995).

In regard to claim 1, Hasegawa et al. teach the tubular structure as claimed, where the tubular structure (embodiments that consist of one layer are taught at col. 7, lines 17-32, particularly lines 25-27 and 29) consists of an ethylene vinyl acetate copolymer (EVA), an ethylene-propylene rubber (EPR) and a hydrated inorganic compound (col. 2, lines 55-67 and lines 48-49 and col. 3, lines 29-40). The relative amounts of EVA and EPR of 80:20 to 40:60 overlaps with the claimed amounts for the EVA and EPR (col. 2, lines 64-67), and the amount of

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the hydrated inorganic compound of 5 to 50 pbw (col. 3, lines 29-32) falls within the claimed amount for the one or more additives.

In regard to claim 8, Hasegawa et al. teach the tube as discussed above in regard to claim 1. Furthermore, Hasegawa et al. teach that magnesium hydroxide is a suitable material for the hydrated inorganic compound (col. 3 lines 52-55), and the amount of the hydrated inorganic compound of 5 to 50 pbw taught by Hasegawa et al. (col. 3, lines 29-32) overlaps with the claimed amount for the additives listed under section (d) of claim 8.

In regard to claim 25, Hasegawa et al. teach a blend of the EVA, EPR and hydrated inorganic compound (col. 2, lines 55-67 and lines 48-49 and col. 3, lines 29-40).

Claim Rejections - 35 USC § 103

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al. (USPN 6,755,995).

Hasegawa et al. teach the tubular structure as discussed above.

Hasegawa et al. fail to teach that the vinyl acetate content of the ethylene vinyl acetate copolymer is about 60 to 90%.

Hasegawa et al., however teach that the flame retardancy of the ethylene vinyl acetate copolymer is comparatively high (relative to that of polyethylene homopolymer) (col. 2, lines 55-58). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have increased the amount of the vinyl acetate in the ethylene vinyl acetate copolymer relative to that of the ethylene repeating unit in order to achieve the desired degree of flame retardancy, depending on the particular desired end result, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the

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art in the absence of unexpected results. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). MPEP 2144.05 II.B.

11. Claims 10, 21-24, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoh et al. (USPN 3,941,904) in view of Hasegawa et al. (USPN 6,755,995).

In regard to claim 10, Hoh et al. teach a reinforced flexible hose comprising a reinforcement layer sandwiched between a polymeric inner tube and an outer cover layer (col. 13, line 65-col. 14, line 11).

Hoh et al. fail to teach that the polymeric inner tube consists of the components recited in claim 10.

Hasegawa et al., however, disclose a tube which is pliable (col. 7, lines 34-36) that either consists of (embodiments that consist of one layer are taught at col. 7, lines 25-32, particularly lines 25-27 and 29) or comprises a layer that consists of (multilayer embodiments are taught at col. 7, lines 17-25 and lines 39-43) an ethylene vinyl acetate copolymer (EVA), an ethylene-propylene rubber (EPR) and a hydrated inorganic compound (col. 2, lines 55-67 and lines 48-49 and col. 3, lines 29-40). The relative amounts of EVA and EPR of 80:20 to 40:60 overlaps with the claimed amounts for the EVA and EPR (col. 2, lines 64-67), and the amount of the hydrated inorganic compound of 5 to 50 pbw (col. 3, lines 29-32) falls within the claimed amount for the one or more additives. Since Hasegawa et al. teach that the tube is pliable (col. 7, lines 34-36), it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the composition taught by Hasegawa et al. as the material of the polymeric inner tube of the tube of Hoh et al. since a blend of ethylene vinyl acetate copolymer (EVA), an ethylene-

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propylene rubber (EPR) and a hydrated inorganic compound is a well known suitable material for use as the material of a flexible tube as taught by Hasegawa et al.

In regard to claims 21 and 22, Hoh et al. and Hasegawa et al. teach the hose as discussed above. The recitations “is a radiator hose” and “is a heater hose” are intended use recitations that have been given little patentable weight, since it has been held that a recitation with respect to the manner in which a claimed article is intended to be employed does not differentiate the claimed article from a prior art article satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQd 1647 (1987).

In regard to claim 23, Hoh et al. and Hasegawa et al. teach the tube as discussed above in regard to claim 10.

Hoh et al. and Hasegawa et al. fail to teach that the vinyl acetate content of the ethylene vinyl acetate copolymer is about 60 to 90%.

Hasegawa et al., however teach that the flame retardancy of the ethylene vinyl acetate copolymer is comparatively high (relative to that of polyethylene homopolymer) (col. 2, lines 55-58). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have increased the amount of the vinyl acetate in the ethylene vinyl acetate copolymer relative to that of the ethylene repeating unit in order to achieve the desired degree of flame retardancy, depending on the particular desired end result, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art in the absence of unexpected results. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). MPEP 2144.05 II.B.

In regard to claim 24, Hoh et al. and Hasegawa et al. teach the tube as discussed above in regard to claim 10. Furthermore, Hasegawa et al. teach that magnesium hydroxide is a suitable material for the hydrated inorganic compound (col. 3 lines 52-55), and the amount of the hydrated inorganic compound of 5 to 50 pbw taught by Hasegawa et al. (col. 3, lines 29-32) overlaps with the claimed amount for the additives listed under section (d) of claim 8, so the hose taught by Hoh et al. and Hasegawa et al. as discussed above in regard to claim 24 comprises magnesium hydroxide in an amount of 5 to 50 pbw (col. 3, lines 29-32), a range that overlaps with the claimed amount for the additives listed under section (d) of claim 24.

In regard to claim 27, Hasegawa et al. teach the tube as discussed above in regard to claim 10. Furthermore, Hasegawa et al. teach a blend of the EVA, EPR and hydrated inorganic compound (col. 2, lines 55-67 and lines 48-49 and col. 3, lines 29-40).

In regard to claim 28, Hoh et al. teach that the reinforcement member comprises cotton, synthetic yarn or wire (col. 14, lines 1-3), so the hose taught by Hoh et al. and Hasegawa et al. comprises a reinforcement member that comprises cotton, synthetic yarn or wire.

Response to Arguments

12. Applicant's arguments presented regarding the 35 U.S.C. 102 rejection of claims 1, 2, 8, 10 and 21-27 as being anticipated by Igarashi et al. (USPN 5,223,571) are moot due to the withdrawal of this rejection in this Office Action.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter B. Aughenbaugh whose telephone number is (571) 272-1488. While the examiner sets his work schedule under the Increased Flexitime Policy, he can normally be reached on Monday-Friday from 8:45am to 5:15pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Walter B Aughenbaugh /
Examiner, Art Unit 1794

6/19/08